

WHAT IS CLAIMED IS:

1. A tissue connector assembly comprising a surgical fastener comprising two clips and a bridge portion connecting said two clips.
2. The tissue connector assembly of claim 1, wherein said bridge portion is substantially straight.
3. The tissue connector assembly of claim 2, wherein said two clips have an open configuration and a closed configuration.
4. The tissue connector assembly of claim 3, wherein said bridge portion provides a predetermined spacing between said clips in said closed configuration.
5. The tissue connector assembly of claim 3, wherein at least one of said two clips is a self-closing clip.
6. The tissue connector assembly of claim 5, wherein said self-closing clip includes a shape memory material.
7. The tissue connector assembly of claim 5, further comprising a coil surrounding a substantial length of said self-closing clip and releasably coupled to said self-closing clip.
8. The tissue connector assembly of claim 5, wherein said closed configuration is an unbiased configuration.
9. The tissue connector assembly of claim 5, wherein said closed configuration is a loop.
10. The tissue connector assembly of claim 5, wherein said open configuration is a biased configuration, and further comprising a release mechanism having a first position to bias said self-closing clip in said open configuration.

11. The tissue connector assembly of claim 10, wherein said closed configuration is an unbiased configuration, and wherein said release mechanism has a second position to unbias said self-closing clip into said closed configuration.

12. The tissue connector assembly of claim 11, further comprising a coil 5 surrounding a substantial length of said self-closing clip, where said coil is coupled at one point on said self-closing clip and releasably coupled via said release mechanism at a second point on said self-closing clip.

13. The surgical fastener of claim 12, wherein said first position provides for compressing said coil between said first point and second point to form said 10 biased configuration.

14. The tissue connector assembly of claim 13, wherein said second position provides for releasably uncoupling said coil from said second point to form said unbiased configuration.

15. The tissue connector assembly of claim 5, wherein said surgical fastener has 15 two ends including a first end and a second end, and further comprising two tissue piercing members including a first tissue piercing member releasably coupled to the first end and a second tissue piercing member releasably coupled to said second end.

16. The tissue connector assembly of claim 15, further comprising a release 20 mechanism, and wherein said release mechanism activates said release of said two piercing members from said respective two ends.

17. The tissue connector assembly of claim 16, wherein said release mechanism activates the closing of said self-closing clip.

18. The tissue connector assembly of claim 15, further comprising suture, wherein 25 said coupling of said first tissue piercing member to said first end includes suture, and wherein said coupling of said second tissue piercing member to said second end includes suture.

19. The tissue connector assembly of claim 18, wherein said suture of said first coupling and said suture of said second coupling are between about 10 mm and about 300 mm in length.

20. A tissue connector assembly comprising:

5 a surgical fastener comprising
 two clips including at least one self-closing clip having an open configuration and a closed configuration, where said open configuration is a biased configuration and said closed configuration is an unbiased configuration, and
10 a bridge portion having a substantially straight portion connecting said two clips; and
15 a release mechanism having
 a first position to bias said self-closing clip in said open configuration, and
 a second position to unbias said self-closing clip into said closed configuration.

21. The tissue connector assembly of claim 20, further comprising a coil surrounding a substantial length of said self-closing clip, where said coil is coupled at one point on said self-closing clip and releasably coupled via said release mechanism at a second point on said self-closing clip.

20 22. The surgical fastener of claim 21, wherein said first position provides for compressing said coil between said first point and second point to form said biased configuration.

23. The tissue connector assembly of claim 22, wherein said second position provides for releasably uncoupling said coil from said second point to form said unbiased configuration.

25 24. A tissue connector assembly comprising:
 a surgical fastener having two ends including a first end and a second end and including

two clips including at least one self-closing clip, and
a substantially straight bridge portion connecting said two clips; and
two tissue piercing members including a first tissue piercing member
releasably coupled to the first end and a second tissue piercing member
releasably coupled to said second end.

5

25. The tissue connector assembly of claim 24, further comprising a release mechanism, and wherein said release mechanism activates said release of said two piercing members from said respective two ends.

26. The tissue connector assembly of claim 25, wherein said release mechanism
10 activates the closing of said self-closing clip.

27. A surgical method to attach tissue comprising:
positioning two piercing ends of a fastener near one side of a first tissue at a
piercing distance, where said fastener includes two clips each having an
open configuration and a closed configuration, and a bridge portion joining
15 said two clips, where said bridge portion spaces said two clips a clipping
distance when in said closed configuration, and where said piercing distance
is approximately equal to said clipping distance;
piercing said first tissue with said piercing ends with said two clips in said
open configuration;

20

positioning said bridge along said one side;
piercing a second tissue with said two clips in said open configuration;
drawing said clips in said open configuration through said second tissue; and
actuating said release mechanism.

28. The method of claim 27, wherein said self-closing clip includes a shape
25 memory material.

29. The method of claim 27, wherein said first tissue is the heel or toe of a graft
vessel, wherein said second tissue is a target vessel, and where said drawing

TECHNICAL FIELD

includes parachuting said first tissue onto said second tissue, and wherein said actuating joins said first and second tissue to form an anastomosis.

30. The method of claim 27, wherein said actuating joins said first and second tissue to form a horizontal mattress suture.

U.S. GOVERNMENT USE